AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions and listings of claims in the application:

LISTING OF CLAIMS:

1. (currently amended): A master information carrier comprising:

~~having thereon~~ a pattern of a magnetic layer representing information to be transferred to a high-density recording slave medium where ~~the~~ track width is not larger than 0.3 μm, ~~wherein the improvement comprises that~~

wherein the pattern comprises a plurality of tracks, and

wherein at least one of following conditions is met:

when the width of each of said plurality of tracks is smaller than length of one scanning with an electron beam that forms the pattern, the width of each of said plurality of tracks is greater than ~~drawn by scanning a given track a plurality of times with~~ drawing diameter of ~~an~~ the electron beam, and

when the width of each of said plurality of tracks is greater than the length of one scanning with the electron beam, the length of the one scanning is greater than the drawing diameter of the electron beam ~~whose drawing diameter is smaller than the track width~~.

2. (currently amended): ~~A~~ The master information carrier as defined in Claim 1, wherein at least one track from said plurality of tracks has the width equal to [n-(n-1)k]×d ~~in which~~, when ~~it is assumed that W represents the track width,~~ n represents ~~the~~ number of times by which said

at least one track is scanned by the electron beam, d represents the drawing diameter of the electron beam and k represents a coefficient representing the degree of overlap between the scannings, ~~W=[n-(n-1)k]×d,~~ and where the value of k is in ~~the~~ a range of not smaller than 0 and not larger than 0.8.

3. (currently amended): ~~A~~ The master information carrier as defined in Claim 2, wherein ~~in which~~ the value of k is in the range of not smaller than 0.2 and not larger than 0.8.

4. (currently amended): ~~A~~ The master information carrier as defined in Claim 1, wherein ~~in which the~~ at least one track from said plurality of tracks has a width greater than drawing diameter of an electron beam that scans the pattern onto the master information carrier ~~master information carrier is produced by drawing a pattern by scanning each track a plurality of times with an electron beam whose drawing diameter is smaller than the track width~~ and ~~which is~~ wherein the master image carrier is modulated according to ~~the~~ information to be transferred while rotating a disc ~~coated with photoresist,~~ thereby forming ~~making~~ a substrate of the master image carrier having an irregularity pattern by mastering on the basis of the pattern drawn by the electron beam, and forming a magnetic layer on the substrate.

5. (new): A master information carrier comprising:

a substrate; and

a pattern of a magnetic layer representing information to be transferred to a high-density recording slave medium where track width is not larger than 0.3 μm, the magnetic layer is formed on the substrate,

wherein the pattern comprises a plurality of rectangular protruding portions with substantially straight end portions.

6. (new): The master information carrier as defined in Claim 5, further comprising:

a protective film covering the magnetic layer;

a reinforcement layer positioned between the protective film and the magnetic layer; and

a lubricant layer positioned on top of the magnetic layer suppressing deterioration in durability of the magnetic layer.

7. (new): The master information carrier as defined in Claim 6, wherein the protective film is 5 to 30 nm thick, the reinforcement layer is made of silicon, and the substrate comprises at least one of a metal, nickel, silicon, glass, quartz, aluminum, alloy ceramics, and synthetic resin.

8. (new): The master information carrier as defined in Claim 7, wherein the height of each of said plurality of rectangular protruding portions is in a range of 80 nm to 800 nm.

9. (new): The master information carrier according to Claim 5, wherein the height of each of said plurality of rectangular protruding portions is in a range of 100 nm to 600 nm,

wherein the magnetic layer comprises at least one of cobalt, cobalt alloy, iron, iron alloy, nickel and nickel alloy, and wherein thickness of the magnetic layer is approximately 50 nm to 500 nm.

10. (new): The master information carrier according to Claim 5, wherein the magnetic layer comprises at least one of iron alloys: FeCo and FeCoNi and thickness of the magnetic layer is approximately 50 nm to 500 nm.

11. (new): The magnetic information carrier according to Claim 5, wherein the thickness of the magnetic layer is approximately 100 nm to 400 nm.

12. (new): The magnetic information carrier according to Claim 5, wherein the substrate is a resin substrate comprising at least one of acrylic resins, polycarbonate, polymethyl methacrylate, vinyl chloride resins, polyvinyl chloride, vinyl chloride copolymer, epoxy resins, amorphous polyolefins, and polyesters, and wherein when the substrate is the resin substrate, height of said plurality of rectangular protruding portions is in a range of 50 nm to 1000 nm.

13. (new): The magnetic information carrier according to Claim 5, wherein the substrate comprises of resin and height of said plurality of rectangular protruding portions is in a range of 100 nm to 500 nm.

14. (new): The magnetic information carrier according to claim 5, wherein the magnetic information carrier is disc-shaped.

15. (new): A method of producing a master information carrier comprising:

scanning a first portion of a track of a disc using an electron beam, the electron beam having a diameter smaller than a width of the disc's track;

shifting the electron beam to scan an additional part of the track previously not covered by the electron beam;

scanning a second portion of the track using an electron beam, the second portion comprises of the additional part and a part of the first portion; and

forming a pattern of a magnetic layer in accordance with information to be transferred to a high-density recording slave medium by the scanning performed by the electron beam thereby producing the master information carrier,

wherein the track width is not larger than 0.3 μm.

16. (new): The method according to claim 15, wherein when W represents the track width, n represents number of times by which one track is scanned by the electron beam, d represents drawing diameter of the electron beam and k represents a coefficient representing the degree of overlap, $W=[n-(n-1)k]\times d$, and the value of k is in the range of not smaller than 0 and not larger than 0.8.

17. (new): The method according to claim 16, wherein the value of n is not smaller than 2.

18. (new): The method according to claim 17, wherein as the value of n increases or as the value of d decreases, and as the value of k increases, shape of the tracks comprises approximately rectangular protruding portions.

19. (new): The method according to claim 16, wherein a track comprises a protruding portion and wherein roundness of the protruding portion is governed by the drawing diameter d of the electron beam.

20. (new): The method according to claim 16, wherein the master information carrier is produced by drawing the pattern by the scanning of each track a plurality of times with the electron beam whose drawing diameter is smaller than the track width and which is modulated according to the information to be transferred while rotating a disc coated with photoresist, making a substrate having an irregularity pattern by mastering on the basis of the pattern drawn by the electron beam, and forming the magnetic layer on the substrate.

21. (new): The master information carrier according to claim 1, wherein the tracks comprise a substantially rectangular protrusions.

22. (new): The master information carrier according to claim 21, wherein end portions of the rectangular protrusions are relatively straight.